

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1-9. (Cancelled)

10. (New) Peptides, or fragments thereof, as stimulators of insulin secretion and pancreatic beta cell function, each peptide having at least 50% sequence identity based on the ClustalW alignment method with sequences selected from the group comprising AVITGACERDVQCGGGTCCAVSLI and the respective amino acid sequences of SEQ ID Nos. 1 to 17, each peptide being selected from the group comprising:

a peptide having at least 50% sequence identity based on the ClustalW alignment method with the amino acid sequence of dermaseptin and the partial structure A-WKD-LKN-GKAAGKAVLN-VTDMVN-

a peptide having at least 50% sequence identity based on the ClustalW alignment method with a peptide having a structure selected from the group comprising the partial structure KG----LL--ASCKLS—C, the structure SEQ ID No. 6 GKPFYPPPIYPEDM (peptide 24, *Bombina variegata*), the partial structure FLP--AG-AA---PKIFC-I—KC and SEQ ID No. 10 ALSILRGLEKLAKMGIALTNCKATKKC (peptide 3.8, *Rana palustris*);

a peptide having at least 50% sequence identity based on the ClustalW alignment method with the amino acid sequence of esculentin and the partial structure GIFSK---KK-KNLLISGLKNVGKEVGMDVVRTGIDIAGCKIKGEC;

a peptide having at least 50% sequence identity based on the ClustalW alignment method with the amino acid sequence of bombesin and the peptide having the partial structure ---G-QWA-GH-M; and

a peptide having at least 50% sequence identity based on the ClustalW alignment method with the amino acid sequence of a peptide selected from the group comprising AVITGACERDVQCGGGTCCAVSLI, SEQ ID No. 1 RRKPLFPFIPRPK (peptide 1.10, *Agalychnis calcarifer*), SEQ ID No.7 IYNAICPCKHCNKCKPGLLAN (peptide 25, *Bombina variegata*), SEQ ID No. 2 a peptide having the N-terminus sequence



MLADVFEKIMGD... (N-terminus of peptide 1.7, *Agalychnis litodryas*) and SEQ ID No. 8 a peptide having the N-terminus sequence XXPLAPFFQAVFK... (N-terminus of peptide 1.8, *Phyllomedusa trinitatis*).

11. (New) A peptide according to Claim 10, in which each peptide has at least 80% sequence identity based on the ClustalW alignment method with sequences selected from the group comprising AVITGACERDVQCGGGTCCAVSLI and the respective amino acid sequences of SEQ ID Nos. 1 to 17.
12. (New) A peptide according to Claim 10, in which each peptide has at least 90% sequence identity based on the ClustalW alignment method with sequences selected from the group comprising AVITGACERDVQCGGGTCCAVSLI and the respective amino acid sequences of SEQ ID Nos. 1 to 17.
13. (New) A peptide according to Claim 10, in which each peptide has more than 95% sequence identity based on the ClustalW alignment method with sequences selected from the group comprising AVITGACERDVQCGGGTCCAVSLI and the respective amino acid sequences of SEQ ID Nos. 1 to 17.
14. (New) A peptide according to Claim 10, in which the peptide is selected from SEQ ID No. 3 AVWKDFLKNIGKAAGKAVLNSVTDMVNE (peptide 2.9, *Agalychnis litodryas*) and SEQ ID No. 9 ALWKDILKNVGKAAGKAVLNTVTDMVNQ (peptide 2.10, *Phyllomedusa trinitatis*).
15. (New) A peptide according to Claim 10, in which the partial structure is GIL—LK-FA—AGKG----LL—ASCKLSGQC.
16. (New) A peptide according to Claim 15, in which the peptide is selected from SEQ ID No. 12 KGAAGLLEVASCKLSKSC (peptide 4.22, *Rana saharica*), SEQ ID No. 15 GILSTIKDFAIKAGKGAAGLLEMASCKLSGQC (peptide 5.6, *Rana saharica*) and



- SEQ ID No. 16 GILLDKLKNFAKTAGKGVLSLLNTASCKLSGQC (peptide 6.5, *Rana saharica*).
17. (New) A peptide according to Claim 10, in which the peptide is selected from the group comprising SEQ ID No. 11 FLPIIAGVAAKVFPKIFCAISKKC (peptide 4.1, *Rana pipiens*) and SEQ ID No. 17 FLPLLAGLAANFLPKIFCKITRKC (peptide 8.3, *Rana saharica*).
18. (New) A peptide according to Claim 10, in which the peptide has the partial structure GIFSK---KK-KNLLISGLKNVGKEVGMDVVRTGIDIAGCKIKGEC, the peptide being selected from SEQ ID No. 13  
GIFSKFGRKKIKNLLISGLKNVGKEVGMDVVRTGIDIAGCKIKGEC (peptide 5.1 *Rana saharica*) and SEQ ID No. 14  
GIFSKLAGKKLKNLLISGLKNVGKEVGMDVVRTGIDIAGCKIKGEC (peptide 5.4 *Rana saharica*).
19. (New) A peptide according to Claim 10, in which the partial structure is ---G-QWA-GH-M, the peptide being selected from the group comprising SEQ ID No. 4 Pyr-QRLGHQWAVGHLM-amidated (peptide 21, *Bombina variegata*) and SEQ ID No. 5 Pyr-DSFGNQWARGHFM-amidated (peptide 22, *Bombina variegata*).
20. (New) A peptide as claimed in Claim 10 with at least one amino acid modification by insertion of fatty acid at the alpha amino group of native amino acid or an epsilon amino group of a substituted lysine residue.
21. (New) A peptide as claimed in Claim 10, having at least one amino acid substitution and/or modification including N-glycated, N-alkylated, N-acetylated, N-acylated, N-isopropyl, and / or N-pyroglutamyl amino acids.



22. (New) A pharmaceutical composition including at least one peptide according to Claim 10 in admixture with a pharmaceutically acceptable excipient.
23. (New) A pharmaceutical composition including at least one peptide according to Claim 14 in admixture with a pharmaceutically acceptable excipient.
24. (New) A pharmaceutical composition including at least one peptide according to Claim 16 in admixture with a pharmaceutically acceptable excipient.
25. (New) A pharmaceutical composition including at least one peptide according to Claim 17 in admixture with a pharmaceutically acceptable excipient.
26. (New) A pharmaceutical composition including at least one peptide according to Claim 18 in admixture with a pharmaceutically acceptable excipient.
27. (New) A pharmaceutical composition including at least one peptide according to Claim 19 in admixture with a pharmaceutically acceptable excipient.
28. (New) A pharmaceutical composition as claimed in Claim 22 which further comprises at least one further pharmaceutically active agent, the, or each, further pharmaceutically active agent being selected from one or more sulphonylureas, meglitinides, metformin, and/or thiazolidinediones, or a mixture thereof.
29. (New) A pharmaceutical composition as claimed in Claim 22, the pharmaceutical composition being for delivery through transdermal, nasal inhalation, oral or injected routes.
30. (New) A method for stimulating insulin secretion by activation of physiological stimulus-secretion coupling pathways, rather than by antimicrobial action involving cell lysis, the method comprising administering to an individual an effective amount of the



peptide selected from the group comprising brevinins, dermaseptins, esculentins and peptides, or fragments thereof, as claimed in Claim 10.

31. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of a peptide selected from the group comprising brevinins, dermaseptins, esculentins and peptides, or fragments thereof, as claimed in Claim 10.
32. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 10.
33. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 14.
34. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 16.
35. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 17.
36. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 18.



37. (New) A method to stimulate insulin secretion and / or moderate blood glucose excursions, the method comprising administering to an individual an effective amount of peptides, or fragments thereof, as claimed in Claim 19.
38. (New) A method for the treatment of type 1 or type 2 diabetes mellitus, the method comprising administering to an individual an effective amount of a peptide selected from the group comprising brevinins, dermaseptins, esculentins and peptides, or fragments thereof, as claimed in Claim 10.